

**Between TINA and SNAFU:
Dilemmas (not resolved so far)
of Military Policy**

*A wall, called TINA¹, runs to the left;
on the right there is another, known as SNAFU.
Along the narrow corridor delimited by the two obstacles proceeds
something we could call creative thinking:
a mixture of common sense, good will,
ability to balance realism and illusions,
historical awareness, with a hint of cynicism and even a sense of humor.
The light is very scarce, the temptation to look back nagging and tempting.
Nevertheless, it is exciting to move forward ...*

¹ An explanation of the two acronyms is urgent. TINA stands for There Is No Alternative; SNAFU stands for Situation Normal, All Fucked Up. The two expressions can take on different shades of meaning: with the first one we may want to express a mild and lazy resignation but also the conviction that we live in the best of all possible worlds; the other denotes a pessimism without remedy.

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First Dilemma: Nuclear Issues

Abstract

This paper aims to examine the issues and problems inherent in the nuclear age that still threaten the survival of Humanity. Almost seventy-five years after the first explosions, it is believed to make a sort of balance, considering the evolution of military atom technology and the related doctrines of employment. The intent of what is written is purely informative and does not appeal to specialized readers.

1. Introduction

Twenty-two million times. This is the multiplication factor that relates TNT to uranium for military use. If you want to equal the power of thermal and mechanical destruction of a *gram* of enriched uranium you must use twenty-two *tons* of TNT. The nuclear revolution, the epochal turning point of the war is here, in this proportion. And not only that, it is not only space that is devastated in an incomparably higher way but also time: radiation spreads like a shroud on the cycles of nature, including human generations, for many years, they become and invent a new, radioactive History therefore it marches and degenerates, with such modalities that any other accident, chemical or mechanical, cannot even pale equal.

Furthermore, there is no natural cataclysm, apart from the impact of a very large meteorite or an irrepressible pandemic, which can keep pace with a large-scale nuclear war². These two natural events are then the few, along with a simultaneous chain of large earthquakes or volcanic eruptions, which can equal another demonic characteristic of a TNW (total nuclear war): the very short time required to complete, a handful of hours. In short, no human society, small or large, powerful or poor, can absorb an atomic catastrophe of military origin without flaking and disappearing.

In short, the human race, in its tumultuous evolution, has succeeded in creating the conditions for its own self-extinction: a completely anti-evolutionary result. This condition was born of a mixture of technological progress, politics, the role played by deep impulses of collective psychology, organizational automatisms and pure *hybris*.

Even before the baptism of the atomic age (July 1945 with the Trinity experiment in New Mexico) there had already been two signs, on a much smaller scale, of the fact that Mankind had created something beyond his capacity for control : two technological-political blows to his lordship over the world and on itself.

The First World War did justice to a way of conceiving the war that gave, I believe we can argue, from the Neolithic; a conception that placed man at the center of the war phenomenon as a maker, interpreter and narrator. Mechanized warfare, just as the industrial revolution in the civil sphere had changed work by de-humanizing it, made it clear that millions were nothing more than pawns, ants that the system first produced, as living soldiers, and then eliminated , as dead soldiers. A gigantic chain of assembly and disassembly, whose meaning was still narrated in traditional ways (political claims, racism and profusion of nationalism) which, though soon replicated in the second world war, served only itself and its own perpetuation.

In the second act of the "Second Thirty Years War", the great strategic bombings of German and Japanese cities³ introduced some significant novelties: the verticalization of war, with the

² One hundred explosions of one hundred kilotons each (where a kiloton is equivalent to the explosion of a thousand tons of TNT) would be enough to bring all human societies, especially the most industrialized ones, to their knees ... and we're talking about using a fraction of the destructive potential available.

³ As is known, Italy, although very heavily hit, avoided the horror peaks experienced by its Axis allies thanks to many factors, of which we recall: the lesser strategic importance of the Italian front, the greater architectural and urban resistance of the its cities, the fact that since 1943 it came out, albeit very badly and at the price of a civil war, from the black alliance. In summary, the Italian victims of air raids were about a tenth of those in Germany.

power of the air to take over, which would no longer be lost, in the manner of conduct military operations; the scientific nature of methodically trying to set the city on fire; the consequent priority assigned to the killing of civilians, understood as an essential part of the enemy war system⁴.

As mentioned, however, with the explosions of atomic bombs on Japan, the nature of war and history, makes a qualitative leap, turns the page in a revolutionary way, even if the awareness of change will find it difficult to impose itself in collective psychology. To summarize: 1) technology becomes an independent variable in the evolution of the war system⁵; 2) with the establishment of the balance of terror, the old "mors tua vita mea" or translated in war language "if you want to win the war you must kill your enemy" must become "if you want to win the war you must save your enemy". Winning the war, indeed, it becomes impossible, making war becomes a game in which everyone loses, that is, is exterminated, no matter whether is the aggressor, the attacked or even the neutral spectator. The Bomb⁶ imposes on Humanity a new kind of peace, based on fear and not on goodwill or love: in the paradoxical nature of the atomic age, the absolute evil, the extinction of humanity by its own hand, becomes the life insurance policy of the human race⁷.

Let's get to the heart of the discussion. We talked about the balance of terror, or mutual assured destruction (MAD)⁸, that is the condition in which states endowed with a nuclear arsenal, small or enormous, are able to dissuade other states, under the same conditions, from attacking them, being able to inflict on them a retaliation, always nuclear, of unacceptable proportions⁹. In

⁴ This fact led, and still causes, some unfortunate fascist mind to introduce an unacceptable similarity between the aerial bombardments and the Nazi extermination work against the Jews and all the other "sub-humans". Unacceptable for many reasons of which we remember only: 1) the carpet bombing against the cities was a choice imposed also by the absence of the technological alternative of the precision bombardment: the Americans tried us for almost all the war and failed in 90% of the cases with aiming errors at macroscopic times; 2) how it is possible to compare raids and deportations with the road between anti-aircraft guns and fighters, at the price of one hundred thousand deaths among allied aviators, it is difficult to understand, unless in fact there is a fascist mentality with its characteristic intellectual dishonesty; 3) Nazi-fascist racism cannot be approached with animosity even against Germans, Italians and Japanese, "normal" in time of war. The project of domination of the Aryan race was on quite different levels: it must also be remembered that, in German projects, it had to extend, after the Jews and the other human "scraps", to a couple of hundreds of millions of Slavs ...

⁵ Clausewitz, in his admirable model, had placed the War, and every war, at the center of a triad composed by a political objective (a rational component, that is, the fruit of a cost / benefit analysis), by an extreme tendency, that is the push psychological to exterminate the enemy until the last being (irrational component) and finally, third "leg" of the triad, by a set of factors that escape calculation and hatred, ie the case, the environment and even the will and the capacity of political and military leaders (non-rational component). The nuclear age adds a "leg", the technological one, and the Clausewitzian model becomes a four basic variables one, without, of course, losing an ounce of its insight.

⁶ With a capital letter, to understand the military nuclear system as a whole: warheads, vectors, etc.

⁷ To the least passionate readers of these topics it will be clear that I am distilling to the maximum a mole of arguments that by now fills entire libraries and of which the final bibliography wants to be only a pale introduction. Seized also by an attack of vanity, I allow myself to postpone the profane reader, who wanted to deepen the nuclear and war issue in general, to my page on <academia.edu>, via google of course ...

⁸ It stands for Mutual Assured Destruction.

⁹ Much has been discussed about what is meant by "unacceptable": it is not enough to consider the geographic extension and the amount of population to deduce, for example, that Russia could

doing so, however, they also dissuade themselves, in order to avoid reprisals from others. As can be seen, it is a communication code of a crystalline simplicity and therefore, in its essence, of inevitable efficacy. Henry Kissinger, about the "cold war" between the US and the then USSR, spoke of the two countries as two scorpions enclosed in a bottle.

A small parenthesis must now be opened. What could happen instead in a situation where a nuclear country faces one without Bomb? To tell the truth it has already happened (before the USSR equipped itself with nuclear weapons it found itself at the mercy of the American B52s with the warheads in the holds), and it also happens now (Iran is facing the United States and Israel, both nuclear countries): the only indications that come from History, indications not answers, seem to suggest that 1) whoever has the Bomb hesitates to use it against those who do not have it if it is not attacked by them, perhaps due to political opportunities and fear of a bad figure and 2) those who do not have it try to get it as soon as possible. In any case, this situation is extremely unbalanced, therefore dangerous: moral qualms can fall, nuclear proliferation can become uncontrollable, etc.

The moral of what has just been said is that, given the practical impossibility of abolishing nuclear weapons, we must try to achieve a situation of dissuasion that is as stable, lasting and general as possible, in order to allow the entire humanity to enjoy the only advantage offered by the irruption in the history of nuclear power: the unveiling and the realization of the risk of extinction with the consequent elevation of the war to taboo, starting from a certain degree of intensity.

The balance of terror, to work, must match the factual reality with its own name, let's say so; that is, terror and balance must coexist without dominating each other. To this it is necessary, and sufficient, that certain conditions occur, which however are absolutely mandatory:

- 1) The Bomb system of each owner, that is the set of vectors-warheads-command, control, information etc., must be protected from any attempt by anyone to put it out of use with a pre-emptive attack. Nuclear dissuasion is a defensive, retaliatory strategy, so you must be able to hit the opponent, with the same violence, even if you have already been hit nuclear. That is why land-based missiles are strung in very sturdy silos; this is why missiles armed submarines are the real kings of the balance of terror; that is why aircraft that can carry nuclear weapons can take off at very short notice.
- 2) The deterrent available to each actor must be sufficient to punish any attacker unacceptably; we have already mentioned the fact that "unacceptable" is an elastic concept, yet the enormous power of nuclear weapons, especially if aimed at the opponent's cities, allows the number of available warheads to be kept relatively low.
- 3) For the reason just mentioned above, it is also necessary that the deterrent is efficient: therefore a margin of redundancy is admitted in the number of carriers and warheads as well as their distribution in different operating environments. This is why there is the so-called "nuclear Triad", bombs that start from the earth, from the abysses and from the air.
- 4) Last but not least, all the nuclear scrap and the way in which it is organized, deployed and theorized in its uses, must send the opponent (s) a message that must be clear, simple and unambiguous, beyond political, social and cultural differences of the various human groups: if you attack us with the Bomb, from the Bomb you will be destroyed.

This is the basic recipe, the essence, the ideal model of the atomic situation. Only to these conditions atomic peace works at the right regime and can fulfill its sole function: to avoid the war of extinction of the human race through the threat of war itself, using the terror of dying which,

"absorb" the destruction of Moscow, St. Petersburg and Volgograd and then recover ; France could no longer be the same after the vaporization of Paris alone. Also because there are always the very long-term effects of radiation.

given the current degree of human evolution, is the only argument that all men, or rather all politically organized communities, are able to understand.

Any deviation from this model, any "evolution", "correction" dictated by technological progress or academic chat or new operational theory devised in some corridor of any Ministry of Defense, are destabilizing, undermine the assumptions of atomic peace which, we repeat, must be clear precisely because of the devastating power of the weapons from which it derives.

The reader will have understood that the reason for this writing lies precisely in highlighting some of these deviations, past, present and predictable in the immediate future to point out that, too often, a logic that belongs to other domains has been applied to the atomic situation, for example conventional warfare, thus betraying the vital need of respect the uniqueness of the human condition, after 6 August 1945.

2. The frog swells

As is known, the Soviet Union exploded its first nuclear device, thus breaking the American monopoly, in 1949. From then until the end of the 60s - early 70s, the nuclear arms race accelerated so spasmodic (also involving other countries besides the two superpowers) accumulating an incredible number of warheads and gradually establishing the predominance of the missile (both launched from the ground and from submarines) on the bomber. It also maintained some characteristics that were substantially stable enough dictated by the technological level of the time and which were, always summarizing, the following: 1) the bombs transported were rather voluminous and very powerful (from several hundred kilotons to over the megaton¹⁰); 2) missiles, launched from the ground or from submarines, could carry only one warhead; 3) being rather imprecise, given the thousands of kilometers they had to travel, it was decided to consider the cities of the respective enemy as targets; 4) the so-called "extensive declaratory policy" was affirmed: that is, nuclear weapons were tested in the atmosphere and openly declared that they would be used to discourage (or eventually take revenge) a nuclear attack by anyone. It was the deterrent by punishment.

In this period, both elements of the balance of terror were particularly strong. The atomic fear was widespread in the collective imagination, strengthened as it was by periodic explosions in the atmosphere; the people knew that one could die of atomic war and realized, even if confusedly, that all the diffidence and hate that the propaganda of the cold war spread with full hands in their respective factions returned back like a boomerang. Western front and communist countries were the one hostage of the other, looked at the enemy and saw themselves. The war, in short, for millennia considered an inevitable fact, had to be avoided at all costs.

However, the balance was also particularly solid. Arsenals safe, superabundant and ready for use, whatever the enemy could do, proved an essential fact: you couldn't attack, you couldn't start a war, because everyone would have lost it. It is true that sometimes the system threatened to collapse (as during the Cuban missile crisis) for the same reasons, substantially, for which it had already collapsed for example in 1914. But it did not, and it was thanks to the Bomb.

Of course at lower levels of armaments the duel did not stop; the conventional wars were not lacking and in themselves they were often terrible but they never crossed the nuclear threshold. General McArthur lost his job when he asked for the use of the atomic bomb against China during the Korean conflict; the Americans could stay ten years throwing bombs in Vietnam, a country that was friendly to the USSR and China, but the irreparable did not happen. The non-nuclear scenario became the vent of tensions, along with espionage, anti-capitalist and anti-communist paranoia, and industrial military apparatuses became gigantic and self-referential. This was the price that was paid, among other things very expensive in economic terms, but the atomic peace held.

With the benefit of hindsight, we might ask ourselves why we did not make enough efforts not to freeze the situation that existed then, but at least to give more foundation to those elements that, precisely, gave strength to the balance, even of terror : keep the aiming of the bombs only on the cities (the greater the threat = the greater the dissuasion), continue to limit the warheads to only one for missile, increase the controls, perhaps bringing in independent international controls to increase the moratorium on the anti-missile systems .

¹⁰ It should be known but it is better to repeat: 1 kiloton (Kt) delivers an explosive power equal to one thousand tons of TNT; 1 megaton (Mt or Mgt) "worth" one million tons of TNT. Hiroshima received a bomb of about 15 Kt. The radiations emitted only in part are directly proportional to the immediate explosive power.

This has not happened mainly due to two factors: technological progress and the nature of the confrontation between the capitalist world and the communist. For the latter it is good to remember that it is always politics that commands war, and therefore also the threat of war as in the atomic situation; the continuous tension between the two sides prevented on the one hand from managing together a more "creative" view of the balance of terror, on the other hand it served both superpowers to compact their own ranks of allied-customer states. In this sense, the situation in Europe was perfectly suited to the purpose: the presence in the Old Continent of atomic "tactics" weapons, that is to say (relatively) low power, put smaller allies and superpowers on the same boat (the US said they were ready to risk New York to prevent a conventional or nuclear attack on Hamburg for example), but at the same time reduced to zero the autonomy of the small allies (indeed the USA would have risked New York for Hamburg? In doubt, it was better to remain "aligned" to the wishes of the reference superpower ...).

In my opinion, however, the real uncontrollable factor was technological progress, especially when, due to its complexity and costs, it became the monopoly of the military-industrial-bureaucratic complexes of the two camps. In short, it was due to some substantial changes in the warheads and vectors that the small window of historical opportunity that had opened during the initial period of the balance of terror was closed, perhaps forever; an opportunity to use the peculiar and original characteristics of the Bomb to put a brake, perhaps definitive, to the tendency of war and politics to climb towards the worst, towards the most extreme choices.

3. The frog fills with poison

Heads and vectors, we were saying. Nuclear devices, placed in the bomber holds or on the top of missiles that can be launched from the ground or from submarines, undergo a continuous process of shrinking on one side, and on the other begin to diversify according to different operational needs: bombs are created that are more suitable for to release to a greater extent radiation rather than thermomechanical destruction, or the opposite; which also means that different targets can be thought of than cities, such as underground command centers.

But the sore point is in the evolution of missiles. Very simply, they become more and more precise, to the point of leading to errors in the order of a few hundred meters after having traveled for more than seven thousand kilometers. The smaller dimensions of the warheads make it possible to host several of them, up to ten or twelve, on the same missile.

At the beginning of the seventies MIRV vehicles entered service: that is to say containers with more heads for a single missile, moreover these last ones being launchable, during the return in the atmosphere, towards different targets maybe very far from each other. The number of warheads, without prejudice to the number of carriers, undergoes a spectacular surge and the dramatic consequences on the balance of terror.

The reasoning to do is simple and perfectly explains why nuclear paranoia undergoes a sharp acceleration in those years. If I am state A and I have, say, a thousand missiles each with three warheads, I could use half of them to hit, given that they are accurate, the launch sites of the missiles of state B and its airports; state B could respond using its submarines, but I would still have half of my missiles to prevent this retaliation. Thus winning the atomic war, ladies and gentlemen ... It is an argument that fails easily, because my first half of missiles would be seen well before it hits, and then B would immediately launch; also B would never accept to submit after having received an attack of "beheading" (as it was then called) from fifteen hundred warheads on military sites but with millions of civilian deaths due to radiation.

But the reasoning, if we can call it that, becomes the mantra for articles, books, television appearances and academic careers. Too many Clausewitz in jackets and ties even come up with the idea that more terror is good, because it means that in parallel there would be more balance. Which is not true, because the balance is created by keeping terror within certain qualitative limits. With MIRV instead, at least at the level of hypotheses, attacking becomes a temptation; certainly only at a theoretical level, but first, in the years of deterrence based on the invulnerability of launch sites and cities as the only targets, temptation did not exist and that was all.

These arguments are strengthened by the fact that, with the MIRVs (with all the equipment of greater precision and multiplication of the headings), to equip oneself with anti-missile systems from useless indeed to counterproductive, as it was before, becomes a necessity, if one wants to avoid a pre-emptive attack; which implies a new arms race, collateral to the main one. In other words, if in the classical atomic situation one could not defend oneself and therefore the defense consisted in being all hostages of all, now (let's say from the mid-seventies), the anti-missile defense becomes a viable option if not obligatory. First the atomic peace resided in the force of things, now it becomes something to be achieved through technology: so things become irremediably complicated.

Certainly, nuclear peace has held steady even after the advent of multiple warhead missiles and other technological developments mentioned above. It could be said, in short, that the "revolutionary" nuclear innovation has fallen into the system, in the traditional mechanism of international relations. On the one hand, forcing it not to transcend to the limit of generalized war; on the other hand, the presence of nuclear weapons undergoes a process of normalization: the great

atomic fear disappears from the collective imagination, while the managers of atomic power (politicians, military, intellectuals) begin to "think" the Bomb no longer as a moment of breaking of History and of criminal anthropology of humanity as a whole, but as a card to play in the great game of confrontation between states. In short, the atomic evil becomes chronic, and we are convinced that we can live with it.

The most striking example of this new approach is the nuclearization of Europe. We have already said that alongside the great strategic systems (missiles and bombers ready to travel thousands of kilometers to go and hit the territories of the two superpowers) from the beginning of the nuclear arms race the so-called "atomic tactics" were experimented and lined up, smaller bombs that can also be launched from cannons or positioned as nuclear mines, with an oscillating power in more or less around the value of the one exploded in Hiroshima, about 15 kilotons. These weapons were deployed immediately in the territories where the spheres of influence of the two superpowers touched, for example in Europe. We have already mentioned the fact that the strategic justification for the presence of such weapons was that in the final analysis they strengthened the balance of terror because they linked (in fact they talked about linkage) what happened in a local theater of confrontation, Europe precisely for to remain the usual example, with the global comparison between the two Great. This is also because the presence of "small" atomics in Europe would have discouraged even a conventional confrontation, with non-nuclear weapons, that is, in European theater. In other words, if the Soviet Union had attacked with tanks, after some retreats (because the Red Army was considered unstoppable¹¹) NATO would have threatened or implemented the use of tactical nuclear weapons, the USSR would have responded with the same arguments and the two contenders would have found themselves in short to bump into the wall of the use of their own strategic systems in a global nuclear war: from this the practice not convenience / impossibility for the USSR to do the first step, that is conventionally attacking. The same reasoning, with reversed parts, for NATO.

All this argument, not without its internal coherence, served to digest the public opinions of European countries, at least those minimally interested in their survival, the presence of atomic weapons in their home gardens. To whom objected, as stated above, that there was no guarantee that the linkage really worked (that the US would have risked New York to avoid the destruction of Monaco ...) and that instead the only certainty was that the two Great Powers would launch atomics on the European territory, it was answered in the first place that Americans and Soviets had tens of thousands of soldiers in Europe who would have shared the fate of its inhabitants in case of war; secondly, that uncertainty was inherent in the balance of terror at all levels, including direct US / USSR confrontation: in fact how was it possible to threaten each other to use a weapon ... which could only ensure its own destruction? And yet it was done, every minute and second of the cold war.

These were the official truths, the only ones allowed (oh, TINA ...). One of the things that were never said, or very rarely, we have already mentioned: to drop the atomic situation in Europe meant to dominate the political assets according to the wishes of Washington and Moscow. It is unthinkable to question belonging to the two alliances, which is extremely difficult to set up foreign policies with a degree of autonomy that is barely relevant. If you didn't want to be silent and aligned, or voted for neutrality, armed, like Sweden or you left NATO, like France. Across the Wall, the music was even harder, ending with Russian tanks on the streets.

¹¹ This conviction was reaffirmed at every turn in the minds of Western populations, thanks to the memory of the Red Army's run from Moscow to Berlin in the Second World War, and became an unassailable myth. The not a few books written at least to reduce the scope of the "red avalanche" were essentially useless.

The atomic weapon therefore used as an instrument of political domination. Strange destiny, after all, that of the Bomb. Used at birth as a way to end a war, passed through a period of sacralization as a concretization of the impossibility of new general conflicts, soon it became precisely instrumentum regni, and also possibilities, option, paper to play.

All this also because other strategic possibilities were set aside, they were part of the other things that could not even be thought of, not only discuss them. Inconceivable to make Europe a large nuclear-free zone. Inconceivable to keep only the strategic arsenals, avoiding to make the atomic bombs small enough and flexible to be used in a minor war theater. Inconceivable to consider alternative defense models. All these options were immediately excluded.

The paranoid logic of using a weapon that is not, by its nature, like the others as if instead it prevailed over any alternative, because it was the most convenient and the most functional for the superpower's domain interests. Thus we found ourselves, even in Europe, full of atomic bombs, sharing the same fate as Russians and Americans. The whole planet in atomic overdose. Situation normal, all fucked up ...

This condition of nuclear overcrowding, unfortunately we must continue to repeat it, is suited to the conventional and traditional ambit of war (in other words, the more weapons we have the better), but it is incompatible with the atomic weapon which is already hyper-destructive in itself and therefore he would like the quantity in limited terms, just to compensate for the very imponderable that occurs at the time of use. There is also the word to describe all this: overkill, that is the capacity of over-destruction, of annihilation of the existent over and over again. The overkill has begun its domination since the sixties of the last century and, as we will see, it still remains. There are many more weapons, many several times, than they need to destroy everything.

It is obvious that in this context any confrontation, any planned tension, created and managed to obtain political advantages in the international arena has repercussions and involves enormous risks, resounds like a gigantic gong for the whole planet, much more than was the case in the preatomic era .

This is what happened between the end of the seventies and the beginning of the following decade with the so-called "Euro-missile crisis". According to the Western version, which we will use here, the Soviets will break the European balance by introducing a MIRV missile, the SS20 with three warheads, capable of hitting all the main European cities but not the United States. The intent of the USSR, it was said, was twofold: to threaten only the Europeans, but not the Americans, to break the link between the threats to the survival of the Old Continent and that of the New; to introduce the possibility of conventionally invading Europe alone by waving nuclear blackmail. NATO responded by deploying in various European countries, including Italy, new, equally precise devices, the PershingII and the Cruise. The Soviet decision was determined, in the opinion of the writer, by a search for political advantages, through an act of rearmament, at a time when the first major cracks of real socialism were already evident, as well as by an attempt by the Russian military circles of counterbalance the launch of the American "Star Wars" program.

The Euro-missile crisis, which ended with the signing of the INF Treaty (Intermediate Nuclear Forces) in 1987 between Reagan and Gorbachev, created enormous tensions in Europe, with large street demonstrations, floods of debates and exchange of tons of fake news

The most remarkable fact is that the crisis showed that the disadvantages deriving from an instrumental and unscrupulous use of the possession of atomic weapons far outweigh the advantages; using nitroglycerin to bludgeon each other, or threatening to bludgeon each other, it is too dangerous, much better to use real sticks. Nitroglycerin, or the atomic atom to go out of metaphor, should be left for moments when something truly existential is at stake; when the ultimate destinies of a nation are at stake, not for short-term political games. This is so true that the 1987 Treaty was very broad: the missiles, not the warheads, unfortunately, were withdrawn and destroyed; they undertook not to deploy more of that range (between 500 and 5,500 kilometers) not

only in Europe but in any theater. In short, it was an adventurous and risky affair, a play with a fire with which you must not play ...

4. A little bit of nuclear "doctrine"

Let us pause a moment before the collapse of the Soviet Union as a political and economic system occurs, and we dedicate some space to "thinking" about nuclear war. We reiterate that even in this case, it is a question of distilling at most, perhaps beyond what is lawful, a quantity of even abnormal information, which has filled entire libraries and created exclusive academic careers.

Meanwhile we must remember that the atomic age, since its beginning, has been, and still is, the realm of paradox. It was born from the womb of the greatest conventional war in history and from the tumultuous evolution of twentieth-century physics. From the beginning it had a heavy aftertaste of dead end: politicians and strategists, initially only Americans, found themselves possessing an instrument that actually seemed to possess them. In other words, unlike all the other weapons invented up to that point (including firearms), the Bomb has conditioned men at least to the same extent as they used them. How to breed the fastest and most resistant horse in the history of horse breeds, only to discover that it was, to a large extent, indomitable and that the most vital thing for the rider was to simply remain in the saddle.

Already the two explosions on Japan created discomforts and perplexities in many environments very similar to those caused by the great bombings of German cities, especially Hamburg and Dresden. This was due to the spectacular concentration in terms of space and time of the destructive effect: humanity had become accustomed for a long time to large-scale massacres, with thousands of victims, but mostly very diluted over time. From 1943 to 1945, instead, human cataclysms took place, from humans to humans, in a few hours or, in Japan, in a few seconds.

It was undoubtedly a shock that reverberated, in the years immediately following the end of the Second World War, on the mentality of Western public opinion and especially on the monopolists of nuclear power, the American political and military elites. Simplifying, two were the results in terms of thought, both veined by what could be called a sense of omnipotence: a nuclear militarism that was pressing to exploit the American nuclear monopoly and resolve the issue with the Soviet power in a short time, so it was necessary to attack immediately ; and a majority current, inclined to consider the Bomb as a panacea to solve any problem of communist aggression in any part of the world¹².

From this last position the operational doctrine of the Massive Retaliation was born: we do not need larger conventional armies, so much we have the Bomb ... This theory had a short life, because if it demonstrated the ability of the nuclear arsenal to strike blows everywhere and always, it also proved its non-credibility: how could one believe that the USA would really have annihilated nuclear power in a country where, for example, a communist-style guerrilla war was underway? The Massive Retaliation forgot that it is always politics that wages war, that all wars are political, and that therefore the military instrument must be flexible enough to adapt to all kinds of wars. The nuclear stick would not have served in any of the post-war conflict theaters, especially in what was then called the Third World.

In the European theater, which was the fulcrum of the confrontation between the USA and the USSR, and after the latter's access to the Bomb, Western strategists assumed as dogma the fact that the Red Army was unstoppable. The result was a proliferation of tactical nuclear weapons with the related consequences that we have already mentioned previously. The situation changed again

¹² For a minimum of completeness, it must be remembered that there was also the anxiety of many members of the intellectual elite, especially physicists and philosophers. The "pundits" saw clearly the approach of the avalanche of nuclear weapons that was about to submerge the planet and drew painful considerations, promptly ignored. Oh TINA ...

thanks to technology: several conventional weapons, bullets and missiles, entered service in massive quantities starting from the mid-1970s. They could be driven, or even drive themselves, with until then unimaginable precision on small targets, tanks, artillery posts, bunkers. The RMA, the Revolution in Military Affairs, had begun, which thanks to the spectacular advances in microelectronics and the advent of the Internet would have led to the dawn of today's robotic war¹³. This evolution resolved, at least in part, the problem of the risks deriving from having so many nuclear weapons on the ground (in fact many of them were withdrawn from the European theater) and, connecting with the war needs in Asian theaters, resulted in the definitive affirmation of a new operational theory, Flexible Response, which definitively supplanted Massive Retaliation and all other related doctrines, and thus coincided with a large quantitative and qualitative return of conventional weapons.

At the strategic level, that of the large weapon systems connected to the direct confrontation of the superpowers, the nuclear doctrine expanded, diversified and changed, parallel to the technological changes and the entry of new countries into the nuclear club. We must recall what was said earlier about missiles and warheads; the former acquire ever greater precision, the latter are reduced in size and explosive power. The synergy between the two evolutions leads to diversified arsenals, able to adapt to different missions.

Of course, and this is a very important point, the official justification for the presence of nuclear weapons was always that they would preserve peace through terror: but what reveals the hypocritical and ideological character of this position is that the code of nuclear terror it must rest on simple and immediately communicative bases, that is, concretized in a structure of equally elementary arsenals. The complexity of nuclear war machines, instead, uselessly and dangerously complicated the messages that the contenders, now not only the two superpowers, exchanged. Thus an infinite nuclear "chatter" was born and developed, characterized, among other things, by two well-known defects: the conviction that if something, technically, can be done, it must be done and must be justified; the Bomb is the most democratic weapon in existence (it kills everyone, even those that have yet to be born), but the discussion on its management must be as elitist as possible.

I hope you will remember that at the beginning of this essay I outlined the salient features of Nuclear Deterrence by Punishment: it avoids nuclear attack by threatening retaliation, or revenge if you prefer, of the same type; for this purpose the nuclear arsenal must be protected, sufficient, efficient, capable of inflicting intolerable damage and presented in a clear and unequivocal message, the so-called declaratory policy. To obtain all this, considered the delirious destructive power of the Bomb, it is enough that the overkill is equal to one, that is that one is able to destroy once the attacking countries or countries. This is the classic model of the balance of terror, defensive and passive.

But, as already said, by dint of accumulating bombs, here are other options. To begin with, the so-called "Deterrence by Denial": I have the means to destroy your offensive instruments and I do it, so I caution myself in advance. At the conventional level it is normal practice: I send my planes to destroy an enemy airport whose planes could attack me. But at the nuclear level things get complicated horribly. I attack the silos where my opponent's missiles are, so I avoid their attack which would destroy me even if I can retaliate; better yet, save the peace ... because my opponent, knowing that I can destroy his missiles, would do nothing. Quite right? Mistaken! Anyone with nuclear weapons on missiles knows that it would be perfectly useless without an early warning radar system; so it would immediately launch as soon as my missiles

¹³ I will try to deepen the themes of the "non-human" war in the second part of "Between Tina and Snafu".

became detectable. Deterrence as a punishment must also be directed against the enemy's launch systems, and not against cities, and therefore is inherently destabilizing. Nuclear terror, to function, that is, to avoid total war, must be directed against cities, otherwise it becomes a dangerous provocation. If I threaten the opponent's missiles, he will try to move them, defend them better, even launch them before I destroy them: all things that cannot be done with a city. It may seem more "moral" to threaten the adversary's missiles rather than its cities, but in the paradoxical logic of the balance of terror this is not true: the missiles precisely serve, by threatening retaliation, to defend the cities, so they can't be attacked.

The attentive reader will have realized that an essential difference between the Deterrence by Punishment and that by Denial lies in when to use one's nuclear weapons. In the first, you shoot for second, as a punishment, in the second for first. In fact, the principle of "No First Use", that is the explicit declaration that the nuclear weapon will never be used for first, is one of the pillars of a rational and correct use of the Bomb. For that, it was much criticized and suffered alternate fortunes. Perhaps the most subtle criticism is that, in principle, one should never say in advance how and when one intends to use one's arsenals ... it is an elementary strategic precaution. It is easy to argue that this is true in the conventional field, but nuclear, for a change, is something else entirely: apart from the moral and historical value of the "No First Use", putting yourself on the defensive involves less effort and expense. It is sufficient to keep one's deterrent safe and efficient in order to ensure the ability to retaliate; striking first implies a more refined technology, to be selective in the choice of targets, and larger arsenals to try to survive the attacked retaliation. All nuclear countries, other than the US and Russia, have very small arsenals, just able to retaliate if attacked ... but it's enough. You can bet your head, or mine if you prefer, that nobody, not even the US, will attack North Korea by nuclear.

Speaking of small nuclear countries, we need to say a few words about Israel, which has a conception of nuclear deterrence *sui generis*. In addition to never having signed the Nuclear Non-Proliferation Treaty (NPT, 1968), the Middle Eastern country has never officially admitted owning the Bomb, although everyone knows roughly how many warheaders it has, where they are, of what power, and to which vectors are assigned. It is not possible to express an opinion on this policy, without recalling the mental and geo-strategic condition that makes Israel a truly special country, practically unique. Apart from the memory of the Shoah, planted like a nail in the Israeli collective mentality that forces to trust, if not of themselves, the geostrategic position is very unhappy. Israel cannot afford to give up an inch or a second to the opponents around it. Hence a very affirmative and reactive conventional military policy; and a nuclear ambiguous, phantasmic and quite different from that of all the other countries that, when they reached nuclear status, trumpeted him in the four winds. Israeli leaders, over the course of the country's history, have most likely shared the idea that being between telling oneself and not calling oneself nuclear was, for their enemies, more disturbing and discouraging.

5. The frog deflates but the poison remains

Communism, both as a political and economic system and as a military empire, breaks up, as is known, at the end of the 1980s. The causes are mostly endogenous, but a good help was given by the abnormal waste of resources caused by the continuous military competition with the American giant. The drop that broke the vase was the SDI, the Strategic Defense Initiative (the so-called "Star Wars"), an enormous program of military investments in highly advanced technology, applied in a series of programs aimed at ensuring the slaughter of Soviet missiles in orbit. The SDI was more of a propaganda and media challenge than real, but the money, many were actually spent (and the effects were seen, cascading, years later) and the Soviets just could not keep pace. However, in the early nineties, a new phase opens up in the international dynamic. The cold war actually ends and the world military system undergoes very significant and long-lasting restructuring.

The factors that act are concomitant: 1) the end of the direct confrontation between the USA and the USSR induces the military apparatuses to reduce, in a spectacular way, the quantitative dimension of the nuclear stocks. Speaking only of the United States, if at the end of the sixties they owned about 30,000 nuclear warheads, in 1989 they fell to around 20,000, to plummet to 2,000 in 2010. Equally radical was the restructuring in qualitative terms. The era of MIRV missiles, which began in the seventies, ends in the first decade of the 21st century: we return to strategic missiles with a single warhead. 2) The gap between the explosive powers of many nuclear weapons and some conventional weapons, bombs and missiles, is reduced due to a parallel effect: very low-powered nuclear warheads, a kiloton and even less are born, while bombs and missiles increase their precision almost to the point of perfection and are equipped with new and much more powerful explosives than the old TNT. 3) Direct energy weapons, especially lasers, begin to be developed continuously; they will be those that in the not too distant future will first support and then replace the weapons with chemical explosives. 4) The anti-missile devices, too, are heading for a brilliant career, which already sees them deployed today trying to stop everything, from mortar bombs to ballistic missiles. 5) The nuclear country club is enriched by a new member, North Korea, while China consolidates its status as a world power.

From the political-strategic point of view, with the 1999 Kosovo War the era of so-called "humanitarian" wars made to stop ongoing genocides or to impose democracy on countries in crisis is inaugurated. It is the new justificationist ideology (but sometimes with good justifications) of the West now free to move without the main antagonist. In reality, being above all a narrative, it lasts very little and, after the 2001 attacks, is replaced by the "War on terrorism". This is also a masking, not so much for the practical impossibility of stopping terrorism by military means, but because it covers, with an increasingly frayed and transparent fabric, the reality of wars to grab the last non-renewable energy resources, gas and oil: a typology that in the decades to come will become prevalent.

What matters to our purposes, however, is something else. The military nuclear does not disappear with the Cold War, but, obeying the dictates of politics, it rationalizes, reorganizes itself; the "dead branches" of the arsenals that have guarded the East-West confrontation throughout the second half of the 20th century, are pruned to grow new shoots, new weapons suited to the new scenarios. In my view, we lose a historic opportunity: to rediscover the reality of the Bomb from the ground up. Not so much to point to its elimination, which is in fact impossible, but to introduce new stakes that will treasure a presence in history that approaches the century. This also to exorcise ghosts that instead are resurfacing: a new antagonism between superpowers, this time triple; the frantic rush to the Bomb by those countries, I think of Iran, who understood that it is the only insurance policy against an invasion.

6. Conclusions

The two world wars were both catastrophes and apocalypses, that is, revelations. The lesson imparted by them, it may seem naive to say, is of glaring evidence: the technology of destruction in the phase of ever-increasing acceleration, coupled with an absolutist ideology (whether it is radical nationalism or the theory of blood purity for the purpose of dominion) led the men to the abyss. The atomic age has revealed that the abyss has no bottom. The balance of terror is a very thin thread of rock through that abyss.

It is correct, even if terribly sad, to consider the lesson of the twentieth century not assimilated: just as the blood seas of the First World War were metabolized to a great extent by their very vastness (how to accept such a great sense of guilt? ... Much better not to make moral accounts and to think that so much blood had to be supported by good causes), so it could be staged thirty years after the reply, to an even more tragic extent.

Similarly, today the nuclear alarm is no longer heard and the weapons of the Apocalypse have disappeared from view, they have set back. Above all it seems to lack the political intelligence to draw, from their presence in history, the necessary consequences. This is evident from the basic characteristics of the political ideologies that have enjoyed the greatest success in the last few years.

Just to give an example, to remain in the western field, the American neoconservative ideology. Generated by the euphoria of the fall of the communist empire and the consequent American monopoly on the international arena, it still heavily conditions the feelings of most of the dominant elites in the West, despite many things having changed in the meantime. I believe we can say, with a good degree of approximation, that its theoretical cornerstones are substantially the following: the world is a very dangerous place and only military force really counts; the international institutions, the UN first, are at the very least useless when not aligned with prejudicial anti-Western positions; preventive war (very forbidden by international law) is a viable road without too many difficulties; any military technology, as long as it works, is welcome.

If you have the impression that it is a return to the pre-1914 way of thinking, I don't think we can say that you are wrong; but you are not mistaken too, I believe, in believing that this vision is functional to a world of competitors in the race for the last energy resources, as well as to a reality where "it will" (TINA) remove the greatest possible number of poor people.

At this point, it is necessary to ask what role nuclear weapons could play in all this, not forgetting to bring into the equation the role of China and Russia, which in their turn do not seem willing in any way to rethink the dictates of the traditional power politics.

At the strategic level, of a military clash between superpowers, the worst threat to the stability of the balance of terror could be represented by new direct-energy devices capable of knocking down intercontinental missiles and incoming cruises; in short, the concretization of the "Star Wars" of Reagan's memory. This would prevent a state from responding to a pre-emptive strike with retaliation. Unfortunately, technological developments in this sense are promising, and it is therefore not difficult to prophesy that in the near future someone, the US-Russia-China, could acquire such a "shield", thus negating the *raison d'être* of the balance of terror.

As we said at the beginning, already in 1972 a treaty was signed between the USA and the USSR, SALT1, which forbade the deployment of anti-missile missiles, which would have given an unacceptable advantage to those who had owned them: but in those years the anti-missile technology it was still in the cradle, and agreeing was relatively easy. Now, and even more in the immediate future, the situation is much more worrying. Without a binding and verifiable political agreement between the countries possessing these systems, the destiny of humanity could indeed be marked.

From which it can be deduced that technology, alone, cannot guarantee any peace, not even understood as the absence of war, except when it does NOT allow certain things to be done, not when it allows them¹⁴. It is therefore vital that the presence and deployment of advanced anti-missile systems return, as an emergency, to the top of the political agenda of humanity.

On a tactical level, which results in the use of nuclear weapons at low or very low power in limited theaters of conflict, the sore point is obviously the temptation to use nuclear weapons to solve critical situations, trusting that the low energies released do not induce to a climb towards the use of more powerful devices. This confidence can be better defined as a real hazard: in fact, it cannot be expected that a country, struck by an atomic bomb even "small", will not respond, if it is able, in the same way and indeed by increasing the dose, as obvious punishment and prohibition to take further steps in the same direction.

This "small" atomic devices affair unfortunately resembles the dynamics of the use of gas in the First World War. Considered weapons suitable for breaking down the front at the local level, they ended up becoming a habit, and tens of thousands of soldiers died horribly. There is also another serious risk in the temptation to use low-powered weapons: the breakdown of the nuclear taboo, which has been holding since 1945 thanks to the idea that the Bomb is ... the Bomb, that is the last ratio, the medicine that, by killing the sick, also scares the disease, and so on by listing metaphors on metaphors.

The only remedy, provided that we cannot agree on the abolition of such weapons or on their non-deployment, is, again, the principle of No-First Use. So, second point on the agenda: NOT FIRST USE as an official and solemn declaration of all the holders of such weapons. The process, among other things, can already today be supported by the evolution of conventional weapons: missiles and bombs equipped with powerful high-explosive warheads and programmable for different uses, many of which coincide with those the "small " nuclear weapons can get..

To sum up, it seems to me sustainable that the relationship of humanity with the Bomb has changed a lot from 1945 to today. By copying the terminology used by a highly esteemed author (Colombo, 2006¹⁵), it can be observed that the two atomics on Japan were instrumental evil in order to induce the supreme good, that is the end of the war; during the first three decades of the Cold War, nuclear weapons were instrumental in preventing the greatest evil, namely the destruction of humanity. In both cases the reasons for use (in 1945) and the deployment (in the post-war period) were very clear, though morally contestable, so the deterrent message could unfold in all its effectiveness. Today, instead, uncertainty predominates and uncertainty does not generate deterrence.

It is therefore necessary to take all possible steps, at a political and technological level, to restore certainty to nuclear deterrence. Here lie the nuclear dilemmas of the present time. We have already mentioned two necessary solutions: to regulate anti-missile systems and to adopt the principle of Non-First Use. What else could we do? What else could we men do that, without an evolutionary miracle, we will no longer be able to get rid of the military atom and we must remain entangled in this kind of mortal embrace that at the same time saves and damns us?

¹⁴ The concept is important and must be repeated. It will be remembered that one of the pillars of the balance of terror lies in the certainty of being able to carry out retaliation: but if the other or the other states have efficient anti-missile systems, security disappears, one is at the mercy of the adversaries and the balance disappears ... In the seventies the anti-missile systems were NOT efficient, therefore the retaliation was sure, therefore the balance could hold up.

¹⁵ The author adopts it writing about terrorism.

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